

## Claims

1. A position-detecting mechanism to detect the position of a subject of measurement, comprising:

a light-emitting means to emit a beam of visible light to the subject of measurement; and

5 a regulating means to regulate the beam so that its cross section will be in a certain shape at the place of the subject of measurement.

2. The position-detecting mechanism according to claim 1, wherein the regulating means includes a marker-forming unit to show a marker indicating the position of the reference line of the position-detecting mechanism in the spot lit up by the beam on the subject of measurement.

10 3. The position-detecting mechanism according to claim 1, wherein the light-emitting means is a light-emitting diode.

4. A position-detecting sensor which comprises (i) a transmitting means to transmit a signal to a subject of measurement, (ii) a receiving means to receive the signal, and (iii) the position-detecting mechanism of claim 1, 2, or 3 and detects the position of the subject of measurement based on the signal received by the receiving means.

15 5. The position-detecting sensor according to claim 4, wherein the transmitting means serves concurrently as the position-detecting mechanism.